

REMARKS

Claims 1-20 are pending. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-20 were rejected under 35 U.S.C. § 102(b) over Sawahashi et al. (U.S. Patent No. 6,069,912). Applicants respectfully traverse this rejection.

Claim 1 recites, in part, an adaptive RAKE receiving apparatus that includes, for example, input signal generating means for generating a complex received signal by gathering multi-path components during a corresponding transmitting signature, an adaptive filtering means for filtering the complex received signal and tap coefficient adjusting means for adjusting tap coefficients of the adaptive filtering means based on MMSE (Minimum Mean Square Error) criterion with at least one constraint (constraint MMSE criterion).

In contrast, Sawahashi discloses the use of a matched filter, not an adaptive filter. Although the Office Action alleges that the two filters are the same, Applicants respectfully disagree. An adaptive filter is able to adjust its coefficients to minimize the mean-square error (as recited in claim 1). As seen in Figure 1 or Applicants' originally filed specification, the updater 120 directly updates the coefficients of the adaptive filter. However, in Sawahashi, the weighted coefficient controller 517 is multiplied with the output of the multipliers 505.

Additionally, Sawahashi fails to disclose input signal generating means for generating a complex received signal by gathering multi-path components during a corresponding transmitting signature and an adaptive filtering means for filtering the complex received signal. The Office Action alleges that baseband processors 504 are analogous to Applicants' claims input signal generating means. However, if this is the case, the processors 504 provide an output signal to the rake combiner 511 not the matched filters 505 as alleged in the Office Action. In fact, Sawahashi fails to teach input signal generating means, as recited in claim 1.

Accordingly, Sawahashi fails to teach, or even suggest, an adaptive RAKE receiving apparatus that includes, for example, input signal generating means for generating a complex received signal by gathering multi-path components during a corresponding transmitting signature, an adaptive filtering means for filtering the complex received signal and tap coefficient adjusting means for adjusting tap coefficients of the adaptive filtering

means based on MMSE (Minimum Mean Square Error) criterion with at least one constraint (constraint MMSE criterion), as recited in claim 1.

Claims 13 and 20 are also believed allowable at least because each of claims 13 and 20 recite features similar to those discussed above with respect to claim 1.

Claims 2-12 and 14-19 are believed allowable for at least the same reasons presented above with respect to claims 1 and 13 by virtue of their dependence upon claims 1 and 13. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Conclusion

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

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